

**What is claimed is:**

1. The method of operating the well jet device during ultrasonic cleaning of the downhole area of a formation, consisting in that an input cone with a shank, a packer and a jet pump, in the case of which a passage for supplying an active medium, a passage for supplying the medium pumped out of the well, and a stepped through passage with a mounting seat between the steps are made, are all installed bottom up, this assembly is lowered on the tubing string into the well, the said input cone being arranged not lower than the roof of the producing formation; after this the packer is released, and, then, a receiver-transformer of physical fields is lowered in the well through the through passage, as made in the case of the jet pump, on a logging cable or a wire together with a sealing assembly, which is arranged on the logging cable or the wire above the tip for connecting the receiver-transformer of physical fields and is installed onto the mounting seat in the through passage made in the case of the jet pump, while ensuring the possibility of reciprocal motion of the logging cable or the wire in the sealing assembly; during the process of lowering background measurements of temperature and other physical fields are conducted along the borehole from the input cone to the well bottom; then the receiver-transformer of physical fields is arranged above the roof of the producing formation; the formation is drained by supplying a liquid medium under pressure to the active nozzle of the jet pump, while several values of pressure drawdown on the formation are successively created and at each value well bottom pressures, the composition and the physical parameters of the fluid coming out of the producing formation as well as the well output are registered; then, while operating the jet pump at a set value of pressure drawdown on the formation, the receiver-transformer of physical fields is moved along the well axis from the well bottom to the input cone, during this operation the inflow profile and the parameters of the formation fluid, the well bottom pressure as well as the changes in the physical fields in the downhole area of the formation are all registered with using the measurements for assessing the work of individual layers of the producing formation and the composition of the fluid coming out of them; then the supply of the liquid medium to the jet pump is stopped, the receiver-transformer of physical fields is removed from the well together with the logging cable or the wire and the sealing assembly, then an instrument for ultrasonic action on the formation is lowered into the well on the logging cable or the wire via the tubing string, the said instrument comprising an irradiator of ultrasound, together with the sealing assembly movably arranged above it on the logging cable; the latter

is installed onto the mounting seat in the through passage, and the irradiator of ultrasound is installed opposite to the producing formation; after this the producing formation is acted on by ultrasonic oscillations, first acting on its non-working layers and then on working layers while going successively from less permeable to more permeable layers and acting on each of them with not less than two ultrasonic frequencies; during the ultrasonic treatment of layers of the producing formation the latter is acted on hydrodynamically by supplying a liquid medium to the active nozzle of the jet pump according to the following scheme: creation of stepwise drawdown on the formation, keeping of the said drawdown, stepwise restoration of the hydrostatic pressure of the liquid medium at the well bottom and keeping of this pressure, wherein the time of keeping the drawdown on the formation is set to be greater than the time of acting on the formation by the hydrostatic pressure of the liquid medium, and the number of cycles of the hydrodynamic action on each layer of the formation in combination with ultrasonic oscillations should not be less than 5; and after finishing acting on each layer of the formation with ultrasonic oscillations in combination with the hydrodynamic action a control measurement of the well output is carried out while the jet pump is operated, and after finishing acting on the whole formation with ultrasonic oscillations in combination with the hydrodynamic action the instrument for ultrasonic action on the formation is removed out of the well to the surface, hydrodynamic and geophysical studies of the well are conducted with the use of the jet pump and replaceable functional inserts; then the assembly with the jet pump is taken to the surface, and the measures necessary for putting the well into exploitation are carried out.

2. The well jet device, comprising the receiver-transformer of physical fields, the instrument for ultrasonic action on the formation, replaceable functional inserts and, mounted bottom up on the tubing string, the input cone with the shank, the packer with the central passage made therein and the jet pump, in the case of which the active nozzle and the mixing chamber are installed as well as the passage for supplying an active medium, a passage for supplying a medium pumped out of the well, and a stepped through passage with the mounting seat between the steps are made; in the stepped through passage alternatively installed are the sealing assembly, which is arranged movably on the logging cable or the wire above the tip for connecting the receiver-transformer of physical fields or the instrument for ultrasonic action on the formation, and replaceable functional inserts, i.e., a depression insert and an insert for recording curves reflecting restoration of formation pressure in the

under-packer area of the well with a sampler and an autonomous instrument; the instrument for ultrasonic action on the formation comprises the irradiator of ultrasound, which is made with the possibility of irradiating ultrasonic oscillations at not less than 2 frequencies, and the pressure gauge; the diameter  $D_2$  of the stepped through passage in the case of the jet pump below the mounting seat is at least 1 mm greater than the diameter  $D_1$  of the instrument for ultrasonic action on the formation, and the diameter  $D_3$  of the central passage in the packer is not less than the diameter  $D_2$  of the stepped through passage in the case of the jet pump below the mounting seat.